Seattle Solid Waste

Drivers & Challenges in Developing & Implementing MSW Recycling Programs

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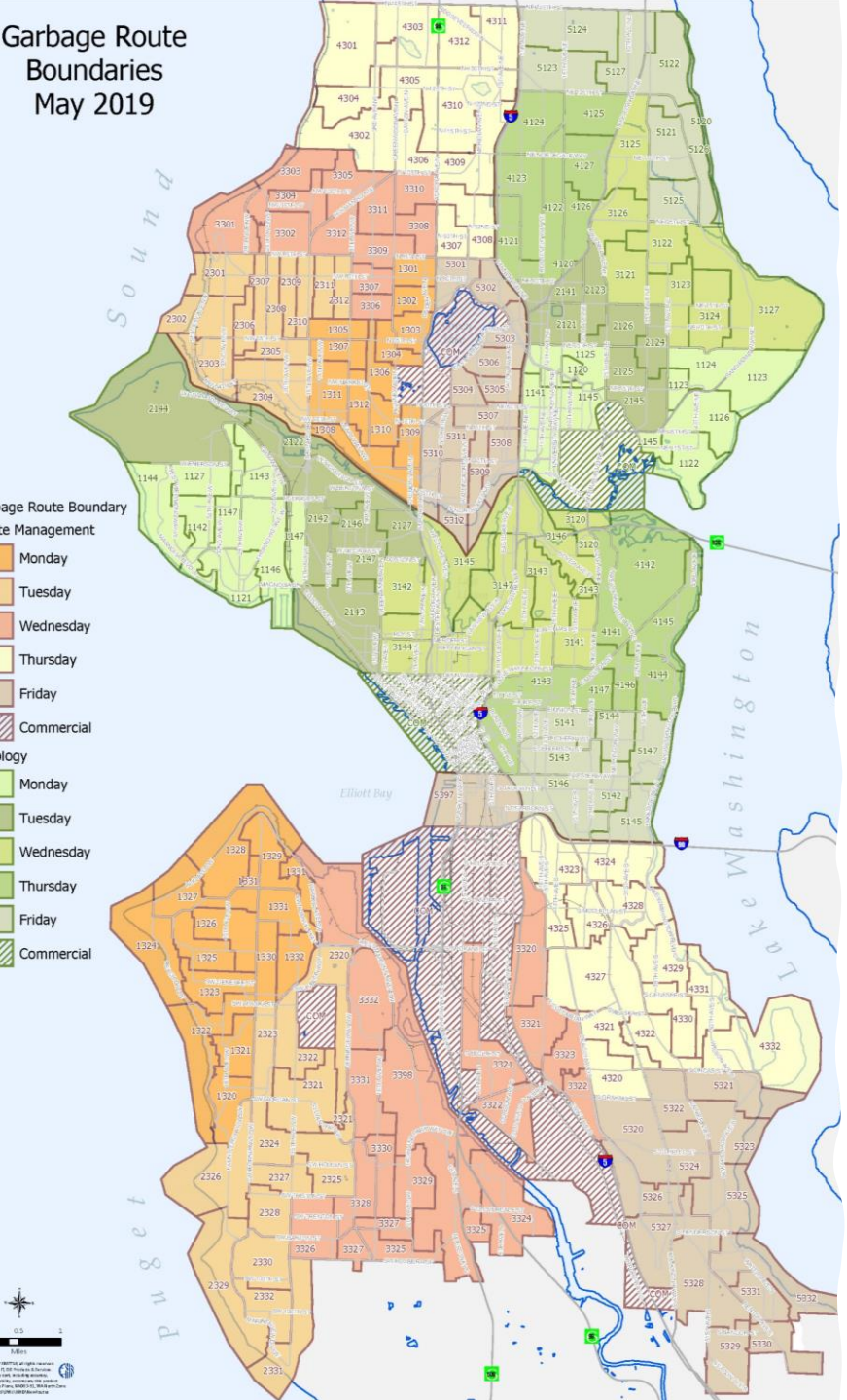


Who does Seattle Solid Waste serve?

Seattle's 2023 Residential Population: ~758K

Number of Solid Waste Customer Accounts:

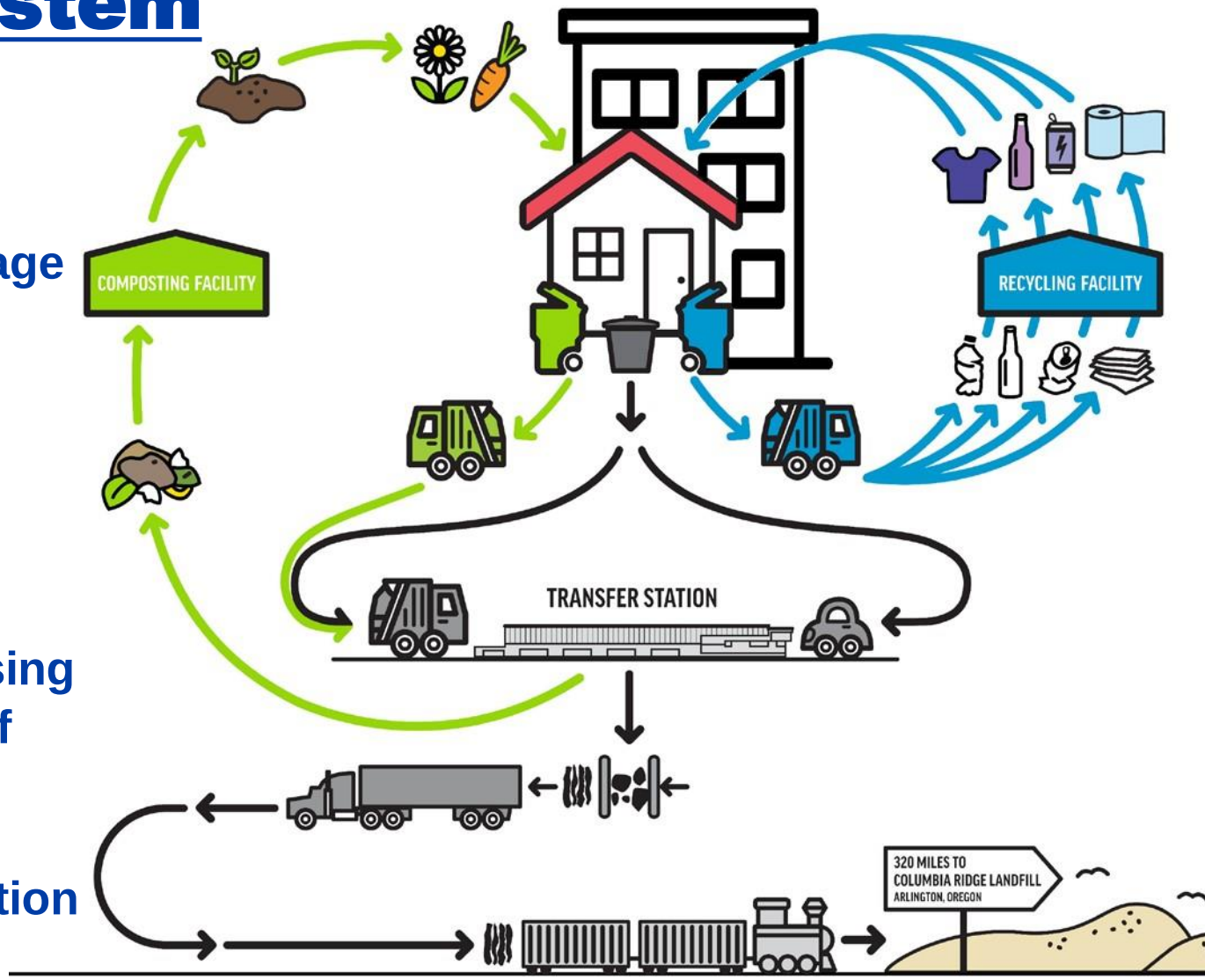
- **~168K Residential**
- **~5K Multifamily**
- **~9K Commercial Garbage**

Number of Businesses in Seattle: ~20K

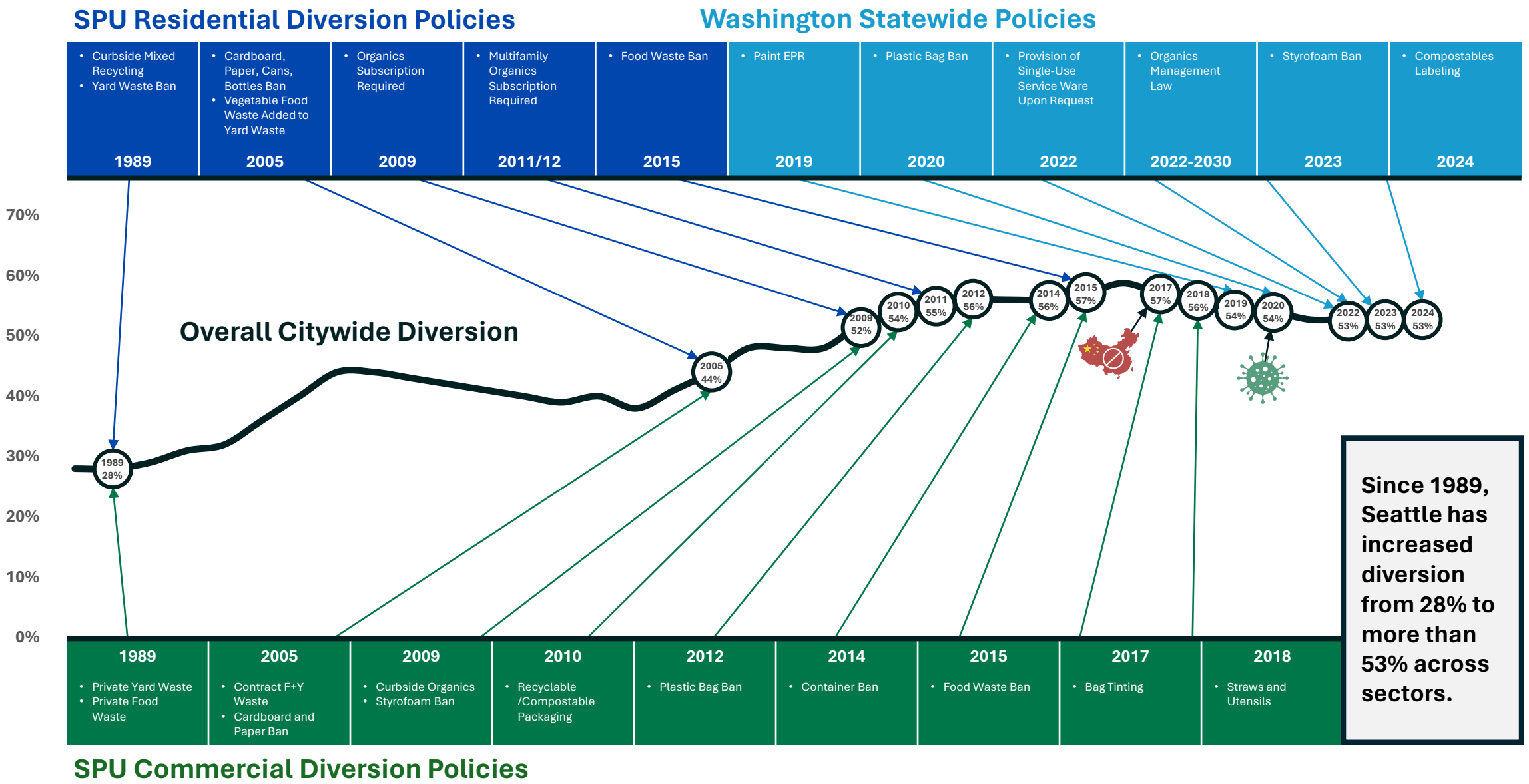
Number of Employees in Seattle: ~450K

Seattle's Solid Waste System

- EVERYONE HAS TO DO IT!
- Conveyance System starts with People!
- Enterprise Fund with Incentivized Rates
- Recyclables & Organics Banned from Garbage
- Contracted Curbside Collection
- Garbage & Organics Transferred at Seattle Public Utilities-owned (SPU) Facilities
- Contract with Privately-owned:
  - Material Recovery Facility (MRF) for Recyclables Processing
  - Compost Facilities for Organics Processing
  - Long-haul Rail to Landfill for Disposal of Garbage
- Commercial entities can Independently Contract for Recyclables & Organics Collection



Policy + Programs + Incentives = Increased Diversion over time



Since 1989, Seattle has increased diversion from 28% to more than 53% across sectors.

Seattle's Drivers & Challenges - Historical

- Closure of Seattle-owned Landfills (1983 & 1986)
- Cost of County-owned Landfill, with limited life horizon & onerous contract terms
  - Seattle had to be out by 1993 or tied into 40-year contract with County
- County proposed moving to waste-to-energy – hugely unpopular
- Grassroots support for Recycling, both Residential & Commercial
- "Waste Not Washington Act" adopted (1989), requiring curbside recycling statewide in urban areas
- Evolved All 3 Legs of the Stool

What Seattle has that Contributes to our Success?

The 3-legged Stool –

1. Environmental Ethos
2. Political Will
3. Dedicated & Sufficient Resources

Not everywhere has this!

Current Challenges – Seattle & Elsewhere

- Constantly Changing Waste Streams – e.g., light-weighting, mixed material formats, plastics
- Organizational Inability to Response & Adapt to Changes Quickly or At All
- Continuous Need to Educate, Educate, Educate Customers
- Increased Densification of Housing Stock – e.g., Customers & Contractor Access to Containers, Equity of Service Levels, Competing Interests
- Horizontally & Vertically-integrated Contractors – e.g., Landfill owners also own MRF with competing/conflicting economic interests; business units not clearly defined with true costs not easily determined; lack of chain of custody verification to responsible end use markets
- Lack of Recycling Infrastructure &/or Ability to Pay for Improvements & Innovations
- Hard to Compete with Long-subsidized Virgin Materials
- Lack of Reliable Domestic Markets or Any Markets At All – Need Demand to Drive Investment
- Balancing Supply & Demand, when Outside City's Control

Current Challenges – Elsewhere

- Missing a Leg of the Stool
  - ❖ Critical to have all 3 –
    - ✓Environmental Ethos,
    - ✓Political Will, &
    - ✓Dedicated & Sufficient Resources
    - ➥ to be Successful!
- Funding Not Directly Tied to Services – e.g., funding comes from property taxes, general funds, etc.
- Lack of Data &/or Ability to Analyze the Data to Drive Policy, Programs, & Operations
- Inability to Pilot, Fail, & Adjust – need to be able to learn & adapt

Seattle's Planning for the Future
2022 Solid Waste Plan Update

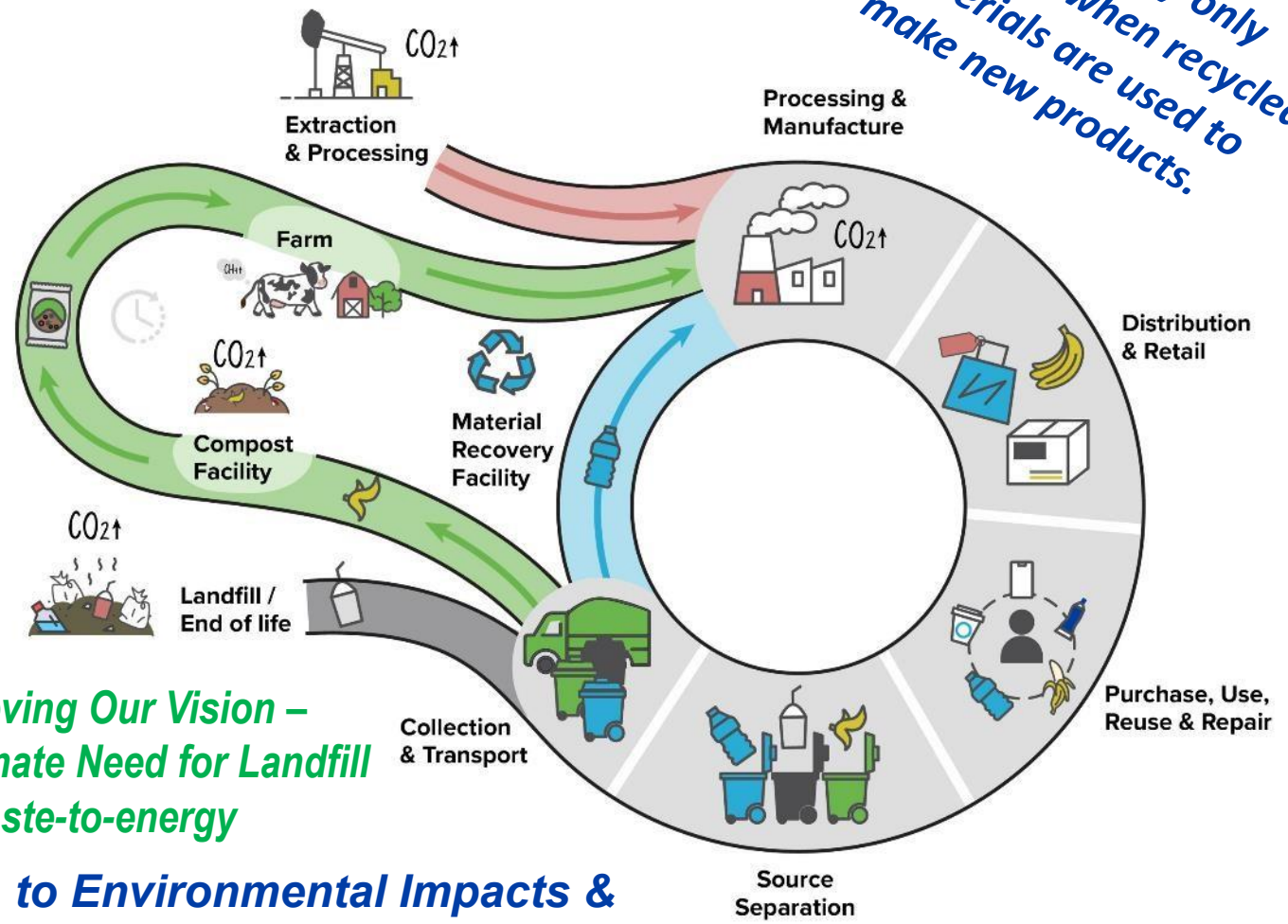
- Emphasizes racial equity & building resilience
- Aligns key Zero Waste policy with SPU's Strategic Business Plan, Washington's "Beyond Waste" Plan, & Seattle's Climate Action Plan
- Takes a life-cycle view of materials that focuses "upstream" to eliminate or minimize waste at the source to reduce harmful impacts
- Highlights limitations of the recycling rate to measure waste prevention
- Calls for development of metrics & targets to measure waste prevention, climate, programmatic, & policy impacts

2022 Solid Waste Plan Update: Moving Upstream to Zero Waste - Utilities | seattle.gov

Moving Upstream & Supporting Circularity

Achieving Our Vision – Eliminate Need for Extraction & Processing

Recycling truly only happens when recycled materials are used to make new products.



Seattle's Vision is Zero Waste

- Prevent Waste
- Deliver climate & other environmental benefits
- Create economic development & innovation opportunities

Recycling can NOT be considered in a silo – it is part of a larger SWM System!

Achieving Our Vision – Eliminate Need for Landfill or Waste-to-energy

Must also consider –

Waste Prevention, Reduction, Reuse, Repair, … to Environmental Impacts & Externalities.

Some Actionable Recommendation

- Reduce Subsidies to Virgin Materials & Financially Incentivize Waste Prevention, Reuse, Refill, & Use of Recycled Content
- Create a Framework that Sets Mandatory Goals & Actions Tied to Timelines & Standardized Reporting Requirements & Verification of Responsible End Markets (Accountability)
- Ensure Adequate Funding & Financial Support
- Hold Producers Responsible for their Products – Support Extended Producer Responsibility (EPR) for Packaging & Paper Products
- Address “Forever Chemicals,” such as per- and polyfluoroalkyl substances (PFAS)

Worth Reading re: Seattle's Success

- ***A Triple Win – Resource Recycling***, 5/14/2020, Dr. Jeff Morris, https://resource-recycling.com/recycling/2020/05/14/a-triple-win/

- ***Seattle's Winning Strategy for Managing Organics*** - BioCycle, 4/14/2020, Dr. Jeff Morris, https://www.biocycle.net/seattles-winning-strategy-managing-organics/

- ***Resisting Garbage – The Politics of Waste Management in American Cities***, 11/2/2021, Dr. Lily Baum Pollans, https://utpress.utexas.edu/9781477323700/ (available through other sources)

THANK YOU!

Questions?

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